

## ABSTRACT

In a wireless communication apparatus adopting a time division duplex system for executing transmission and reception using a plurality of antennas, deviation of amplitude and phase occurring between transmission and reception circuits is detected and corrected using a communication signal. Channel estimation means 105 detects channel information based on reception output of reception circuits 104-1 to 104-N provided in a one-to-one correspondence with a plurality of antennas 101-1 to 101-N. Correction value detection means 110 finds a correction value for correcting deviation occurring between each of transmission circuits 103-1 to 103-N and each of the reception circuits 104-1 to 104-N based on the channel information. A wireless communication apparatus 100 transmits an already known signal (training signal) to a base station with which the wireless communication apparatus conducts communications. The base station executes channel estimation based on the already known signal and generates and transmits a correction signal (probe signal). The correction value detection means 110 of the wireless communication apparatus 100 detects the correction value using the correction signal (probe signal).